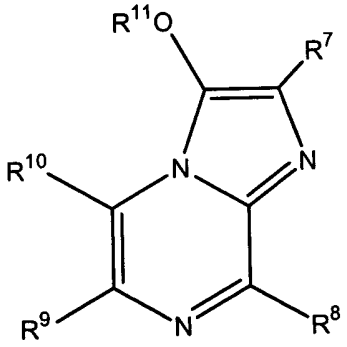
AMENDMENT TO THE CLAIMS

1. (Original) A compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups;

with the proviso that R^{11}, R^{14}, and R^{15} are not all acetyl groups.

2. (Original) The compound of claim 1, wherein

R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$;

R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$; and

R^9 is phenyl, indolyl, $-C_6H_4OH$, $-C_6H_4NH_2$, $-C_6H_4F$, or $-C_6H_4OR^{15}$.

3. (Original) The compound of claim 1, wherein R^{11}, R^{14}, and R^{15} are esters.

4. (Original) The compound of claim 1, wherein

R^{11} is acetyl; and

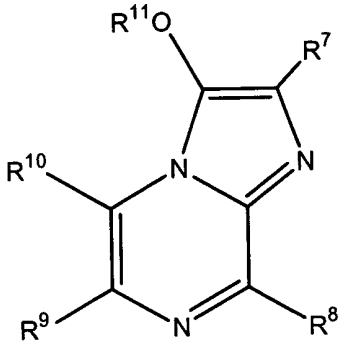
R^{14} and R^{15} are independently butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

5. (Original) The compound of claim 1, wherein

R^{11} is butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl; and

R^{14} and R^{15} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

6. (Original) A compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups; and

wherein the concentration of the compound in a mixture comprising F12 medium and 10% fetal bovine serum at 22°C is reduced by less than 50% after 45 minutes.

7. (Original) The compound of claim 6, wherein

R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$;

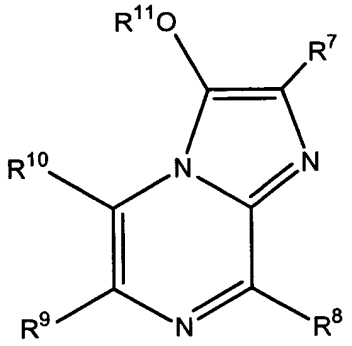
R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$; and

R^9 is phenyl, indolyl, $-C_6H_4OH$, $-C_6H_4NH_2$, $-C_6H_4F$, or $-C_6H_4OR^{15}$.

8. (Original) The compound of claim 6, wherein R^{11}, R^{14}, and R^{15} are esters.

9. (Original) The compound of claim 6, wherein R^{11}, R^{14}, and R^{15} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

10. (Original) A compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups; and

wherein the removal of at least one enzyme-removable group provides a parent compound; and

wherein the time necessary for the concentration of the compound in a mixture comprising F12 medium and 10% fetal bovine serum at 22°C to be reduced by 50% is greater than the time necessary for the concentration of the parent compound in a mixture comprising F12 medium and 10% fetal bovine serum at 22°C to be reduced by 50%.

11. (Original) The compound of claim 10, wherein the removal of at least two enzyme-removable groups provides the parent compound.

12. (Original) The compound of claim 10, wherein the removal of all enzyme-removable groups provides the parent compound.

13. (Original) The compound of claim 10, wherein

R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$;

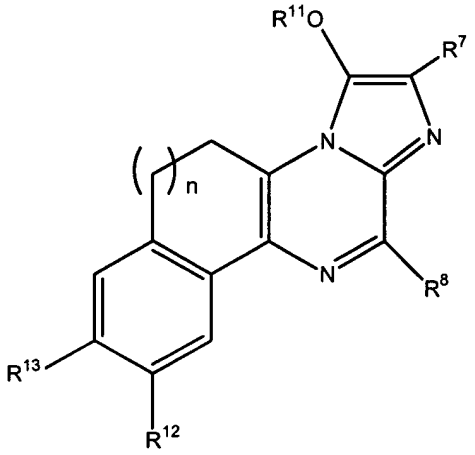
R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$; and

R^9 is phenyl, indolyl, $-C_6H_4OH$, $-C_6H_4NH_2$, $-C_6H_4F$, or $-C_6H_4OR^{15}$.

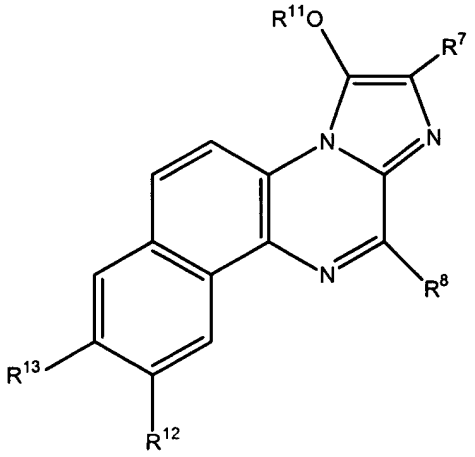
14. (Original) The compound of claim 10, wherein R^{11}, R^{14}, and R^{15} are esters.

15. (Original) The compound of claim 10, wherein R^{11}, R^{14}, and R^{15} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

16. (Original) A compound of formula (XIII) or (XIV)



(XIII);



(XIV);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^{12} and R^{13} are independently -H, -OH, alkyl, heteroalkyl, aryl, or $-OR^{16}$;

n is 0, 1, or 2; and

R^{11}, R^{14}, and R^{16} are independently enzyme-removable groups.

17. (Original) The compound of claim 16, wherein

R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$; and

R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$.

18. (Original) The compound of claim 16, wherein R^{11}, R^{14}, and R^{16} are esters.

19. (Original) The compound of claim 16, wherein R^{11}, R^{14}, and R^{16} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

20. (Original) The compound of claim 16, wherein n is 1.

21. (Original) A composition, comprising:
the compound of claim 1 in solution.

22. (Original) The composition of claim 21, wherein the solution is an aqueous solution.

23. (Original) The composition of claim 21, wherein the solution comprises DMSO or alcohol.

24. (Original) A composition, comprising:
the compound of claim 6, in solution.

25. (Original) The composition of claim 24, wherein the solution is an aqueous solution.

26. (Original) The composition of claim 24, wherein the solution comprises DMSO or alcohol.

27. (Original) A composition, comprising:
the compound of claim 10, in solution.

28. (Original) The composition of claim 27, wherein the solution is an aqueous solution.

29. (Original) The composition of claim 27, wherein the solution comprises DMSO or alcohol.

30. (Original) A composition, comprising:
the compound of claim 16, in solution.

31. (Original) The composition of claim 30, wherein the solution is an aqueous solution.

32. (Original) The composition of claim 30, wherein the solution comprises DMSO or alcohol.

33. (Original) A protected luminophore, which is
a modified coelenterazine;
wherein the enol group has been converted to an ester or an ether comprising an enzyme-removable group; the removal of said enzyme-removable group providing a parent coelenterazine; and
wherein the time necessary for the concentration of the modified coelenterazine in a mixture comprising F12 medium and 10% fetal bovine serum at 22°C to be reduced by 50% is greater than the time necessary for the concentration of the parent coelenterazine in a mixture comprising F12 medium and 10% fetal bovine serum at 22°C to be reduced by 50%.

34. (Original) A kit, comprising:
a protected luminophore; and
a luminogenic protein.

35. (Original) The kit of claim 34, further comprising a deprotecting enzyme separate from the luminophore.

36. (Original) The kit of claim 34, wherein the protected luminophore and the luminogenic protein are in separate containers.

37. (Original) The kit of claim 34, wherein the protected luminophore and the luminogenic protein are in the same container.

38. (Original) A kit, comprising:

a protected luminophore; and

a deprotecting enzyme;

wherein the luminophore and the deprotecting enzyme are in separate containers.

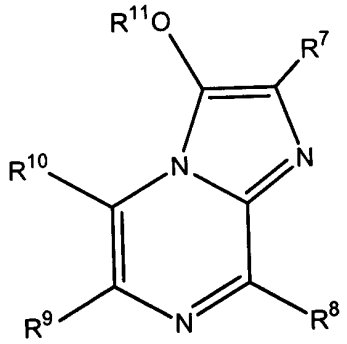
39. (Original) A method of measuring the enzymatic activity of a luminogenic protein comprising:

contacting a luminogenic protein, a deprotecting enzyme, and a protected luminophore in solution to form a composition; and

detecting light produced from the composition.

40. (Original) The method of claim 39, wherein the luminogenic protein is *Renilla* luciferase.

41. (Original) The method of claim 39, wherein the protected luminophore is a compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

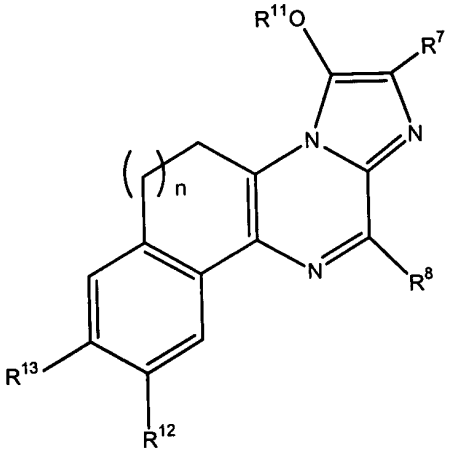
R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups.

42. (Original) The method of claim 41, wherein
R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$;
R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$; and
R^9 is phenyl, indolyl, $-C_6H_4OH$, $-C_6H_4NH_2$, $-C_6H_4F$, or $-C_6H_4OR^{15}$.

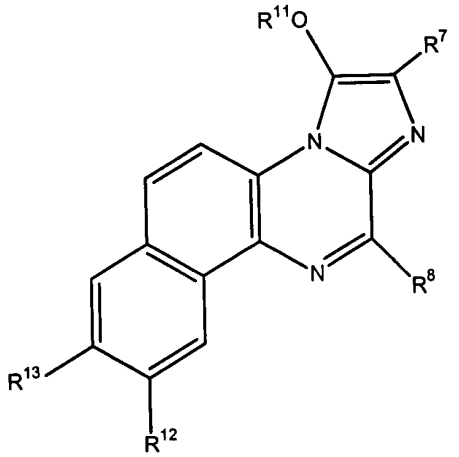
43. (Original) The method of claim 41, wherein R^{11}, R^{14}, and R^{15} are esters.

44. (Original) The method of claim 41, wherein R^{11}, R^{14}, and R^{15} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

45. (Original) The method of claim 39, wherein the protected luminophore is a compound of formula (XIII) or (XIV)



(XIII);



(XIV);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^{12} and R^{13} are independently -H, -OH, alkyl, heteroalkyl, aryl, or $-OR^{16}$;

n is 0, 1, or 2; and

R^{11}, R^{14}, and R^{16} are independently enzyme-removable groups.

46. (Original) The method of claim 45, wherein

R^7 is $-CH_2-C_6H_5$, naphthyl, $-CH_2-C_6H_4OH$, $-CH_2-C_6H_4F$, or $-CH_2-C_6H_4OR^{14}$; and

R^8 is $-CH_2C_6H_5$, $-CH_2C_6H_{11}$, $-CH_2C_5H_9$, or $-(CH_2)_3NHC(=NH)NH_2$.

47. (Original) The method of claim 45, wherein R^{11}, R^{14}, and R^{16} are esters.

48. (Original) The method of claim 45, wherein R^{11}, R^{14}, and R^{16} are independently acetyl, butyryl, acetoxymethyl, propanoyloxymethyl, butyryloxymethyl, or pivaloyloxymethyl.

49. (Original) The method of claim 45, wherein n is 1.

50. (Original) The method of claim 39, wherein the composition comprises a cell.

51. (Original) The method of claim 39, wherein the composition comprises a cell which contains the deprotecting enzyme.

52. (Original) The method of claim 51, wherein detecting light produced from the composition indicates the location of the deprotecting enzyme in a cell.

53. (Original) The method of claim 39, wherein the composition comprises a cell lysate.

54. (Original) The method of claim 39, wherein the deprotecting enzyme is an esterase.

55. (Original) The method of claim 39, wherein the solution is an aqueous solution.

56. (Original) The method of claim 39, wherein the solution comprises DMSO.

57. (Original) The method of claim 39, wherein the protected luminophore is a modified coelenterazine;

wherein the enol group has been converted to an ester or an ether comprising an enzyme-removable group.

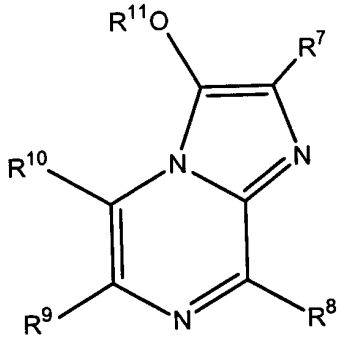
58. (Original) A method of generating luminescence in a living cell comprising a luciferase, the method comprising:

contacting the cell in solution with a protected luminophore.

59. (Original) The method of claim 58, wherein the protected luminophore is a modified coelenterazine;

wherein the enol group has been converted to an ester or an ether comprising an enzyme-removable group.

60. (Original) The method of claim 58, wherein the protected luminophore is a compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

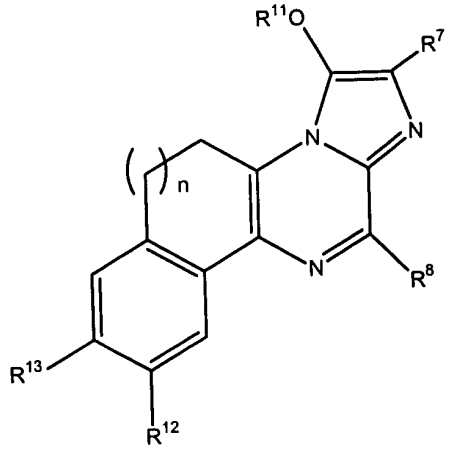
R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

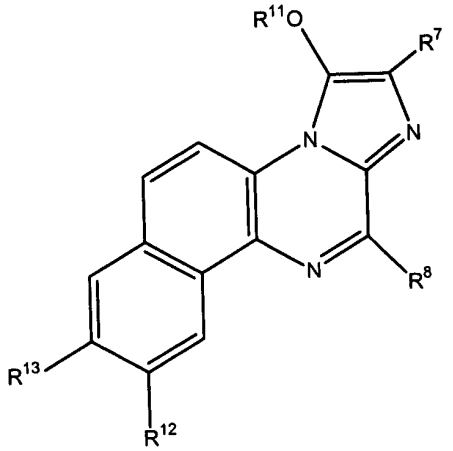
R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups.

61. (Original) The method of claim 58, wherein the protected luminophore is a compound of formula (XIII) or (XIV)



(XIII);



(XIV);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^{12} and R^{13} are independently -H, -OH, alkyl, heteroalkyl, aryl, or $-OR^{16}$;

n is 0, 1, or 2; and

R^{11}, R^{14}, and R^{16} are independently enzyme-removable groups.

62. (Original) A method of measuring the enzymatic activity of a non-luminogenic enzyme, comprising:

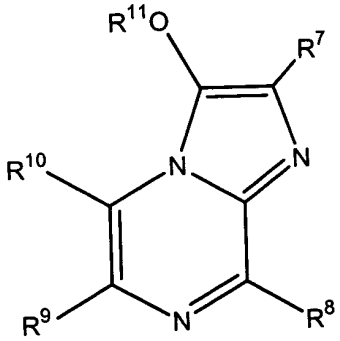
contacting a non-luminogenic enzyme with a liquid mixture comprising a luminogenic protein and a protected luminophore to form a composition; and

detecting light produced from the composition.

63. (Original) The method of claim 62, wherein the protected luminophore is a modified coelenterazine;

wherein the enol group has been converted to an ester or an ether comprising an group that is removable by the non-luminogenic enzyme.

64. (Original) The method of claim 62, wherein the protected luminophore is a compound of formula (XII)



(XII);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

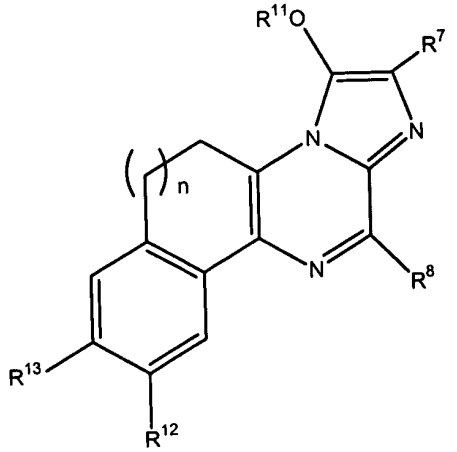
R^8 is H, alkyl, heteroalkyl, or aryl;

R^9 is H, alkyl, heteroalkyl, aryl, or $-C_6H_4OR^{15}$;

R^{10} is -H, $-CH_3$, or $-CH(CH_3)_2$; and

R^{11}, R^{14}, and R^{15} are independently enzyme-removable groups that are removable by the non-luminogenic enzyme.

65. (Original) The method of claim 62, wherein the protected luminophore is a compound of formula (XIII) or (XIV)



(XIII);

70. (New) The compound of claim 1, wherein

R^{11}, R^{14}, and R^{15} are independently a heteroalkyl group containing from 1-20 carbon atoms, and comprising at least one of an ester group and an ether group.

71. (New) The compound of claim 10, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-20 carbon atoms and a heteroalkyl group containing from 1-20 carbon atoms.

72. (New) The compound of claim 10, wherein

R^{11}, R^{14}, and R^{15} are independently a heteroalkyl group containing from 1-20 carbon atoms, and comprising at least one of an ester group and an ether group.

73. (New) The compound of claim 16, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-20 carbon atoms and a heteroalkyl group containing from 1-20 carbon atoms.

74. (New) The compound of claim 16, wherein

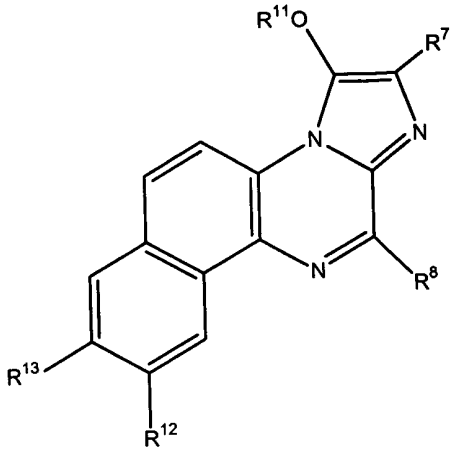
R^{11}, R^{14}, and R^{15} are independently a heteroalkyl group containing from 1-20 carbon atoms, and comprising at least one of an ester group and an ether group.

75. (New) The method of claim 41, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-20 carbon atoms and a heteroalkyl group containing from 1-20 carbon atoms.

76. (New) The method of claim 41, wherein

R^{11}, R^{14}, and R^{15} are independently a heteroalkyl group containing from 1-20 carbon atoms, and comprising at least one of an ester group and an ether group.



(XIV);

wherein R^7 is H, alkyl, heteroalkyl, aryl, or $-CH_2-C_6H_4OR^{14}$;

R^8 is H, alkyl, heteroalkyl, or aryl;

R^{12} and R^{13} are independently -H, -OH, alkyl, heteroalkyl, aryl, or $-OR^{16}$;

n is 0, 1, or 2; and

R^{11}, R^{14}, and R^{16} are independently enzyme-removable groups that are removable by the non-luminogenic enzyme.

66. (Previously added) The kit of claim 34, further comprising DMSO or alcohol or a mixture thereof.

67. (Previously added) The kit of claim 38, further comprising DMSO or alcohol or a mixture thereof in the same container as the protected luminophore.

68. (New) The compound of claim 1, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-20 carbon atoms and a heteroalkyl group containing from 1-20 carbon atoms.

69. (New) The compound of claim 1, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-15 carbon atoms and a heteroalkyl group containing from 1-15 carbon atoms.

77. (New) The method of claim 45, wherein

R^{11}, R^{14}, and R^{15} are independently selected from the group consisting of an alkyl group containing from 1-20 carbon atoms and a heteroalkyl group containing from 1-20 carbon atoms.

78. (New) The method of claim 45, wherein

R^{11}, R^{14}, and R^{15} are independently a heteroalkyl group containing from 1-20 carbon atoms, and comprising at least one of an ester group and an ether group.